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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,665	03/30/2001	Jesse Zhuo	3626-0185P	4288
2292	7590	01/21/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			CHEN, TSE W	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,665

Applicant(s)

ZHUO, JESSE

Examiner

Tse Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated November 1, 2004.
2. Claims 1-12, 15-17 are presented for examination. Applicant has canceled claims 13-14.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2-3, 7, 10, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir, U.S. Patent 5923099, in view of Lee et al., U.S. Patent 5815409, hereinafter Lee.
5. In re claim 1, Bilir discloses a safe shutdown device [backup controller 50 and timer 55] for an uninterruptible power supply (UPS) system [30] [fig.1; abstract; col.2, ll.38-41; col.3, ll.60-67], which comprises:
 - A switch module [inherently, a switch module in the broadest interpretation is needed to generate the loss of AC power signal; the switch module in the broadest interpretation interfaces the loss of AC power signal for backup controller 50] to generate an OFF signal [fig.1, loss of AC power], the OFF signal being outputted to a central processing unit (CPU) [backup controller 50; part of 50 is responsible for processing the various signals] built in the UPS [col.3, ll.60-67] [col.3, ll.1-10], the CPU generating a first shutdown signal [fig.1, begin shut down] and a second shutdown signal [col.3, ll.24-34; inherently, timer is started by a signal in the broadest interpretation] and transmitting the

first shutdown signal to external apparatuses [processing system 10] connected to the UPS [fig.1] after the OFF signal being processed by the CPU so as to shut down the external apparatuses [col.3, ll.11-23; begin shut down signal is issued to processing system after loss of AC power signal had been processed by backup controller to realize a loss of power has occurred].

- A counting module [timer 55], which starts counting after receiving the second shutdown signal sent out from the CPU that receives the OFF signal and outputs a third shutdown signal which is generated [inherently, a signal in the broadest interpretation is generated by timer at expiration in order for subsequent shutdown event to occur] when a counting value coincides with a predetermined time value [4 minutes] [col.3, ll.24-34].
- A shutdown module [backup controller 50; part of 50 is responsible for turning off the UPS], which receives the third shutdown signal and turns off the UPS [fig.1, turn off UPS power; fig.3, power off] in response to the third shutdown signal [fig.2, 62; col.3, ll.24-34].

6. Bilir did not disclose explicitly a switch module which can be manually set by a user to generate an OFF signal.

7. Lee discloses a safe shutdown device [control circuit 30] for a UPS system [col.3, ll.1-18; power supply is uninterrupted in shutdown], which comprises a switch module [power switch 15], which can be manually set by a user to generate an OFF signal [col.4, ll.13-22].

8. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir and Lee before him at the time the invention was made, to use the switch module disclosed by Lee in the safe shutdown device disclosed by Bilir as the ON/OFF switch device disclosed by

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Lee is a well known device suitable for use with the safe shutdown device of Bilir. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to protect systems from being damaged when a power supply is accidentally switched off [Lee: col.3, ll.1-18].

9. As to claim 2, Bilir discloses that the safe shutdown device is installed in the UPS [col.3, ll.60-67].

10. As to claim 3, Bilir discloses that the safe shutdown device is electrically connected to the UPS [fig.3, external UPS interface 51 with UPS connection].

11. As to claim 7, Lee discloses that the switch module is an ON/OFF switch device [power switch 15] [col.4, ll.13-22].

12. As to claim 10, Bilir discloses that the predetermined time value is preset in the counting module [col.3, ll.24-29].

13. In re claim 17, Bilir teaches the safe shutdown device. Therefore, Bilir teaches the method of operating the device.

14. Claims 4-6, 11-12, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir and Lee as applied to claim 1 above, and further in view of Spears et al., U.S. Patent 6304981, hereinafter Spears.

15. In re claims 4-6, Bilir and Lee disclose each and every limitation of the claims as discussed above in reference to claim 1. Bilir and Lee did not disclose explicitly a multiple external apparatuses environment.

16. Spears discloses a safe shutdown device [fault tolerant CPU] for a UPS system [information handling system 120] [col.3, l.58 – col.4, l.3].

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17. As per claim 4, Spears discloses that the external apparatuses comprise more than one computer [servers 122, 124, 126 and workstations 128-144] [col.4, ll.1-7].

18. As per claim 5, Spears discloses that the external apparatuses comprise more than one main control computing device [servers 122, 124, and 126; col.4, ll.1-7].

19. As per claim 6, Spears discloses that the external apparatuses comprises a main control computing device [server 122] and more than one other external devices [workstations 128-144] [col.4, ll.1-7].

20. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir, Lee and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir and Lee in the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir and Lee. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

21. In re claim 11, Spears discloses the main control computing device [server 122] that has a shutdown signal processing module [part of fault tolerant CPU; inherently, a shutdown signal processing module in the broadest interpretation is needed to receive a signal from the UPS to power down] and a main control computing shutdown module [part of fault tolerant CPU; inherently, a main control computing shutdown module in the broadest interpretation is needed to shut itself down when commanded to do so] [col.3, l.58 – col.4, l.7], a fourth shutdown signal [inherently, a shutdown signal in the broadest interpretation is needed to shutdown the

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workstations] being output to other external apparatuses [workstations 128-144] in the connection so as to shut down the external apparatuses [col.4, ll.1-7], and a main control computing shutdown signal [inherently, a main control computing shutdown signal in the broadest interpretation is needed to shutdown server 122] being output to the main control computing shutdown module to turn off the main control computing device [col.4, ll.1-7].

22. Spears did not discuss the details of the modules and signals.

23. Bilir, as discussed above in reference to claim 1, discloses the main control computing device [processing system 10 with safe shutdown device of claim 1 installed in processing system 10; col.3, ll.60-67; safe shutdown device as a board to be installed] that has a shutdown signal processing module [part of backup controller 50; inherently, a shutdown signal processing module in the broadest interpretation is needed to receive the loss of AC power or similar signal] and a main control computing shutdown module [part of backup controller 50; inherently, a main control computing shutdown module in the broadest interpretation is needed to shut the main control computing device down when the power off signal is received], the shutdown signal processing module receiving the first shutdown signal [fig.1, loss of AC power] and sending out a fourth shutdown signal [fig.1, begin shutdown] and a main control computing shutdown signal [fig.3, power off].

24. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Bilir, Lee and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir and Lee in the main control computing device of the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir and Lee. One of ordinary skill in the art

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would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

25. In re claim 12, Spears discloses a first shutdown signal [inherently, a shutdown signal in the broadest interpretation is needed from the UPS to power down] that is output to the main control computing device [server 122] [col.3, l.58 – col.4, l.7] and a fourth shutdown signal [inherently, a shutdown signal in the broadest interpretation is needed to shutdown the workstations] that is send out to at least one other external apparatus [any of workstation 128-144] in connection to shut down the power [col.4, ll.1-7].

26. Spears did not discuss the details of the signals.

27. Bilir, as discussed above in reference to claim 1, discloses the first shutdown signal [fig.1, loss of AC power] that is output to the main control computing device [processing system 10], which then sends out a fourth shutdown signal [fig.1, begin shutdown] to shut down the power [col.3, ll.60-67; safe shutdown device as a board to be installed in processing system 10].

28. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Bilir, Lee and Spears before him at the time the invention was made, to use the safe shutdown device disclosed by Bilir and Lee in the main control computing device of the UPS system with multiple external apparatuses disclosed by Spears as the system is a known system suitable for use with the safe shutdown device of Bilir and Lee. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to extend the protection against power anomalies to multiple computing devices and maximize the battery resource of the UPS with better power down sequencing [Spears: col.2, ll.1-10].

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29. As to claim 15, Spears discloses the predetermined time value is preset in the main control computing device and will be output to a counting module [inherently, a counting module in the broadest interpretation to count the time] when the main control computing device receives the first shutdown signal [col.1, ll.15-28; col.2, ll.1-5].

30. As to claim 16, Spears discloses the predetermined time value that is computed by the main control computing device according to the shutdown times returned from other external apparatuses after the main control computing device receives the first shutdown signal and the computation result is output to a counting module [inherently, a counting module in the broadest interpretation to count the time] [col.7, l.39 – col.8, l.65].

31. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir and Lee as applied to claim 1 above, and further in view of Forrest et al., U.S. Patent 5553296, hereinafter Forrest.

32. In re claim 8, Bilir and Lee disclose each and every limitation of the claims as discussed above in reference to claim 1. Bilir and Lee did not discuss the details of the switch module.

33. Forrest discloses a switch module [touch screen 40, touch screen controller, and power subsystem 10] that is a liquid crystal [col.2, ll.50-51] touch control switch device [col.4, l.63 – col.5, l.4].

34. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir, Lee and Forrest before him at the time the invention was made, to use the switch module disclosed by Forrest in the safe shutdown device disclosed by Bilir and Lee as the liquid crystal touch control switch device disclosed by Forrest is a known device suitable for use with the safe shutdown device of Bilir and Lee. One of ordinary skill in the art would have been motivated to

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make such a combination as it eliminates the need for a separate power switch [Forrest: col.1, ll.41-46].

35. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilir and Lee as applied to claim 1 above, and further in view of Arakawa et al., U.S. Patent 6105138, hereinafter Arakawa.

36. In re claim 8, Bilir and Lee disclose each and every limitation of the claims as discussed above in reference to claim 1. Bilir and Lee did not discuss the details of the switch module.

37. Arakawa discloses the switch module [service processor 3 and electric source control circuit 4] that is a remote controlled receiver [fig.1; col.5, ll.40-47; receives signal from remote terminal 1].

38. It would have been obvious to one of ordinary skill in the art, having the teachings of Bilir, Lee and Arakawa before him at the time the invention was made, to use the switch module disclosed by Arakawa in the safe shutdown device disclosed by Bilir and Lee as the remote controlled receiver disclosed by Arakawa is a known device suitable for use with the safe shutdown device of Bilir and Lee. One of ordinary skill in the art would have been motivated to make such a combination as provides a way to control power remotely [Arakawa: col.1, l.6 – col.2, l.62].

Response to Arguments

39. All rejections of claim limitations as filed prior to Amendment dated November 1, 2004 not argued in entirety or substantively in response filed as said Amendment have been conceded by Applicant and the rejections are maintained from henceforth.

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40. Applicant's arguments, with respect to claim 1 [claim 17 was not amended with new limitation which arguments were directed to] have been fully considered but they are not persuasive.

41. Applicant alleges that Bilir "teaches that when external AC power is lost, UPS would pass 'the loss of AC power signal' to the shutdown device" instead of receiving the signal. Examiner invites Applicant to refer to either previous or current Office Action and note that col.3, ll.60-67 of Bilir was cited to indicate a very well known concept of embedding or integrating a module [e.g., safe shutdown device] into a system [e.g., UPS]. Hence, from the perspective of an integrated safe shutdown device within an UPS, the loss of AC power signal is transmitted to a component [i.e., CPU according to claim] in the UPS.

42. Applicant alleges that "the switch module in this application is for triggering a signal that can be manually controlled by an operator even when AC power is still on." This allegation refers to the newly amended limitation to which the current rejection is set forth above.

43. In response to applicant's argument that "the problems to be solved by Bilir's teaching and those in this application are quite different", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In the instant case, Bilir's intelligent backup power controller will shut down operations in a graceful, nondisruptive manner when main power loss occurs while the system is unattended *or* attended. An attending

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user may switch off the power supply via the very well known switch taught by Lee or a simple unplugging of the AC power supply.

44. As demonstrated above, Applicant's arguments with respect to claim 1 were not persuasive and the rejection is maintained.

45. All other claims were not argued separately.

Conclusion

46. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
January 14, 2005


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